



Polar Ice Tray User Manual

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The Characteristics of Polar Ice

What makes Polar Ice Unique?

- Easy to Use: Just add water, and place in the freezer to enjoy crystal clear ice.
- Convenient: Unique patented design allows for easy retrieval of ice.
- Multi-purpose: Versatile, customizable components adjust to your desire, able to make ice in a large assortment of shapes and sizes.

The Concept of Polar Ice

Mimicking the natural ice formation patterns of lakes and rivers, Polar ice begins freezing from the surface layer, while the water below remains unfrozen (much like the bottom of a pond). The Polar Ice Icebox has an insulated bottom, so that only the surface of the water is exposed to the cold. By allowing the water to freeze from top to bottom, layer by layer, air and impure substances are compressed to the bottom. They then form a layer of “white” or opaque ice, which can easily be removed.



Cleaning & Precautions

- When using for the first time, please clean with detergent and water before use.
- Do not clean in a dishwasher.
- Do not submerge the insulated tray in water.
- Clean with a soft cloth or sponge, do not scrub with rough objects such as bristled brushes to avoid scratching, which may make ice more difficult to remove.
- Keep box away from heat sources.
- Fill with chilled or room temperature water, do not fill with hot water.
- Non-microwavable, do not place in ovens.
- This product is designed exclusively for producing ice; please do not use it for any other purpose.
- The transparency of the ice, and the time it takes to freeze will vary depending on the water quality and the temperature of the freezer.
- Handle ice sensibly to avoid frostbite.
- Falls from high places or heavy impact will damage and crack the casing.
- If the ice is hard to remove, rinse the bottom of the box with water or leave at room temperature for 1-3 minutes. Then slide ice out gently. If removed with force, ice may crack.

Specification

Dimensions of Casing (outer) : L 229 x W 183 x H 134 mm

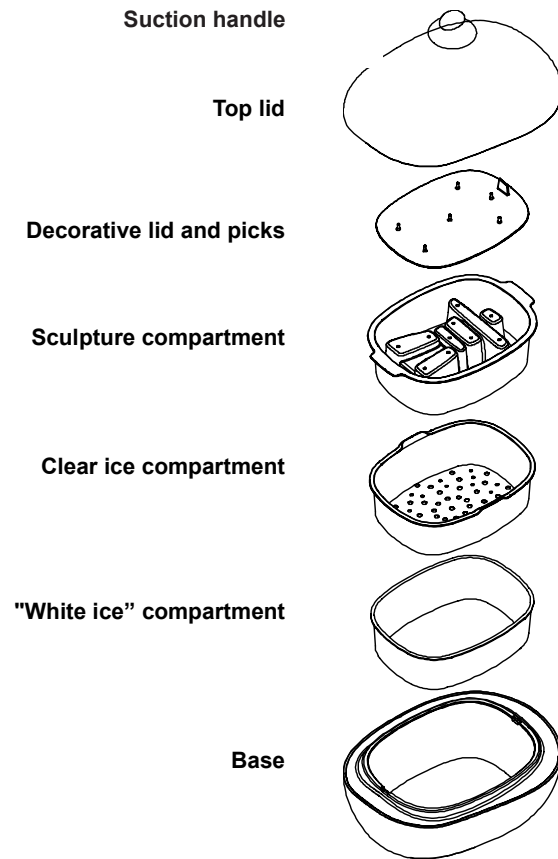
Dimensions of Casing (inner) : L 174 x W 134 x H 55 mm

Dimensions of Ice :
Ice Block : 600 ml
Ice Sculpture : 250 ml

Materials : Food container plastics PP & ABS

Colors : Black, White, Red or Customized color

Composition and Function



Suction handle

Top lid

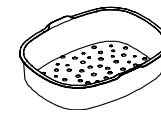
Decorative lid and picks

Sculpture compartment

Clear ice compartment

"White ice" compartment

Base



Clear Ice compartment

Material: PP

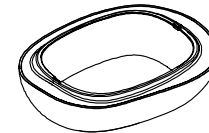
Main function: With small holes on bottom. To hold the clear ice block.



"White Ice" compartment

Material: PP

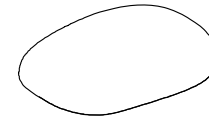
Main function: To hold opaque (white) ice block.



Base

Material: ABS Insulating

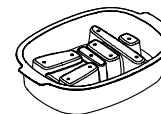
Main function: to insulate the bottom and sides of the ice box for controlling how the ice begins freezing. It can also double as an ice bucket in room temperature.



Top lid

Material: ABS Insulating

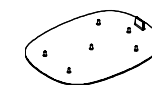
Main function: to act as the lid for the ice bucket.



Sculpture compartment

Material: PP

Main Function: to act as a mould to shape the ice.



Decorative lid and picks

Material: PP

Main Function: to prevent the ice from rising during production, compresses ice. Protruding pick aids in the removal of ice.



Suction handle

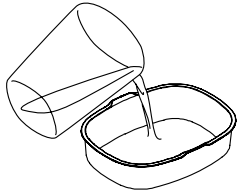
Material: Silicone

Main Function: Sticks to container for easy lid removal.

How to Make Polar Ice

Steps of Assembly – PLEASE READ BEFORE FIRST USE!

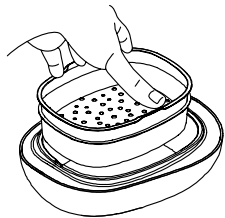
You will need: Clear ice compartment + “White Ice” Compartment + Base



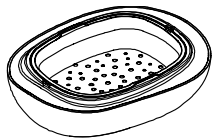
- Pour cold water into the “White Ice” compartment, filling it close to its brim. **DO NOT OVERFILL.**
- The quality of ice produced will vary depending on the water used. Tap water will still produce clear ice, but we suggest residents of areas with undrinkable tap water to use boiled or mineral water instead.



- Place the clear ice compartment inside the “White Ice” compartment, and slowly begin pressing down. The water in the “white Ice” compartment will seep into the clear ice layer through small holes.



- Press down on clear ice compartment until it will go no further.
- Continue pouring water into the compartment until desired level. (The thickness of the ice can reach up to 4 cm). **DO NOT OVERFILL.**
- Place the ice compartments in the insulated base, being careful not to spill any water between the compartments and the insulated base.

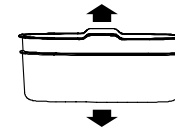


- The water level should be, at most, level with the sides of the base or lower.
- Place tray inside freezer – **DO NOT** put the top lid on during the freezing process.
- It will take 8-12 hours for the ice to freeze sufficiently.
- During the freezing process, please refrain from excessively opening the freezer door or moving the icebox.
- **MAKE SURE THERE IS NO WATER SPILLED BETWEEN THE COMPARTMENTS AND THE INSULATED BASE, AS DAMAGE MAY OCCUR TO THE BASE DURING FREEZING!**

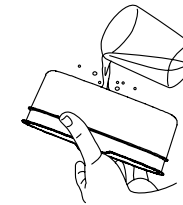
How to Extract the Ice



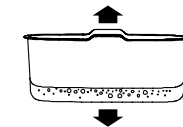
- When the water has frozen sufficiently, the edge of the ice will protrude 5mm above the edges of the container due to expansion. (Please refer to the Conditions of Solidification.)



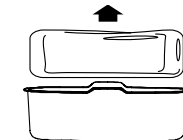
- Remove the ice compartments from the base.



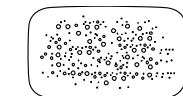
- Prying upon the sides will dislodge the “white ice” compartment.



- If separation is difficult, run water over the base of the “white ice” compartment, or set aside for 1-3 minutes until it is possible to dislodge the ice.



- Continue prying on the sides to dislodge the “white ice” block from the clear ice compartment.



- The ice will be very stiff so if prying does not dislodge the ice block, run it under cold water briefly.

Avoid direct and prolonged contact with the ice to prevent frostbite.

- The clear ice in the upper compartment can be used directly in your beverages.
- The “white” ice in the lower compartment can be discarded.

Conditions of Solidification

There are two conditions of solidified ice that require special attention.



Completely Frozen :

be cautious of extremely low temperatures

- Sufficient freeze time of 8-12 hours.
- “White ice” layer will be raised prominently; center of ice mass will feel completely solid.

Incompletely Frozen :

be cautious of sharp edges

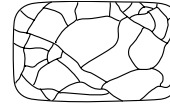


- Insufficiently cold temperature, or less than 8 hours in the freezer.
- White ice” layer will be raised, but the center of the ice may remain liquid.
- Upon opening the compartments, you may find the bottom of the ice hollow, with sharp edges on the edges of the holes. Handle with caution.

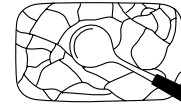
Multi-Purpose Usage

Cracked Ice

Assembly method : Basic components



- Briefly run room-temperature water over the clear ice block, the difference in temperature will cause the ice to crack.



- Use the back of a spoon or another hard object to strike the ice.

- USE CAUTION when striking the ice.

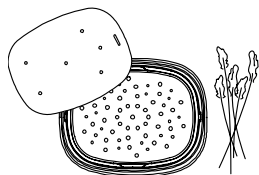
- Light strikes will break ice into chunks of various sizes.



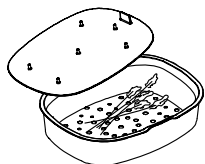
- Irregular ice chunks are perfect for use with cold beverages, especially whisky.

Decorative Ice

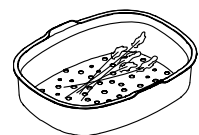
Assembly method : Basic components + decorative object + decorative lid



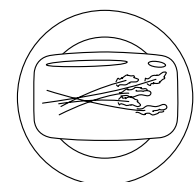
- Adding a decorative object such as flora, letters, or photographs before ice production will make decorative ice.
- To prevent decorations from floating to the top, the decorative lid must be placed on top to keep the object(s) below water.



- After assembly, fill the tray with water, then place on the decorative ice layer slowly, at a slanted angle.



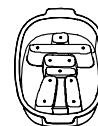
- The lid will stick to the surface of the water, keeping the decorative objects beneath the water.



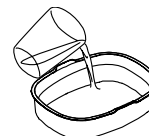
- Allow 8-12 hours to freeze in the freezer.
- If you have difficulty removing the decorative ice, do not flush with water as this will cause the ice to crack. Instead, allow the ice to sit at room temperature for 1-3 minutes for easy removal.
- Decorative ice can be used for plating or centerpiece purposes. For example, Japanese cuisine such as sashimi can be placed upon a decorative ice block to improve its freshness and appeal.

3D Sculpture Ice

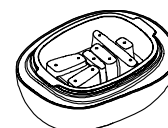
Assembly method : Basic components + Sculpture compartment



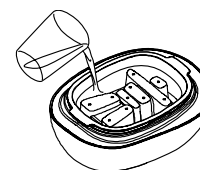
- The sculpture compartment can mould the clear ice into an ice sculpture for decorative purposes.



- Fill the "white ice" layer 2/3 with water.
- Place the clear ice compartment on top.



- Slowly press the sculpture mould down, the water will seep through the holes.
- When the sculpture compartment layer reaches the bottom, press down so slide flaps click firmly into place. Excess water will exit through vents.
- Place compartments in the base and place in the freezer.



- If you have difficulty removing the sculpture ice, do not flush with water as this will cause the ice sculpture to crack. Instead, allow the ice to sit at room temperature for 1-3 minutes for easy removal.



- Avoid pouring water into holes as shown in diagram as this will affect the shape of the ice sculpture.

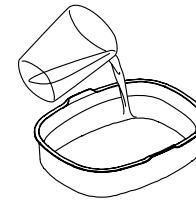


Introduction of ice sculpture:

The inukshuk is a traditional sculptural form used by the Inuit, a tribe of people who inhabit the arctic circle of Canada. They are sculptures of welcome and friendship, and this is why they have also been chosen to be the official logo of the 2010 Winter Olympics held in Vancouver, BC. An inukshuk sculpture would make an ideal centerpiece to welcome guests into your own home for any event.

Rapid Ice Production

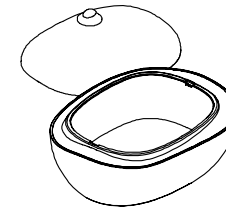
Method of Assembly : Only the “White ice” Compartment



Use only the “White ice” Compartment. If you wish to make regular ice cubes in a hurry, use just the “white ice” compartment to produce common ice cubes. Place directly in the freezer for ice cubes in the shortened time of 2-4 hours. Once frozen, run the ice block under room-temperature water to crack, then strike with the back of a spoon to break up the ice pieces.

Ice Bucket Function

Method of Assembly: Suction handle + Top lid + Base bucket.



- Ready ice cubes can be placed in the base and sealed with the top lid to use as an ice bucket.
- At room temperature, ice can be kept without melting for 2-3 hours.

Q&A

Difficulty with ice removal

The Polar Ice Tray set compartments are designed to fit airtight, to prevent the escape or spillage of air or water. Sometimes, due to the jostling of compartments after assembly, water may leak into other compartments. When this water freezes, ice removal may become difficult.

Solutions :

- Flush with water or set aside : Flush the outside of the ice box with water, or leave in room temperature for a few minutes. It will become easier to extract the ice once it has begun to defrost.
- While putting the compartments together, be careful as to not let water seep into the other compartments.

The inner walls of the ice tray are smooth, if it becomes cracked or scratched, ice removal may also become difficult.

Points of Caution:

- When cleansing the compartments, avoid using rough surfaces such as pads or the rough side of the sponge.
- Avoid dropping the tray, or hitting it upon hard surfaces to remove the ice.

Bubbles in the ice

Under Fast Freezing Conditions (coldest freezer setting): Air dissolved in the water will be moved towards the surface of the water due to the shape of the ice crystals. These bubbles are miniscule, with poor floating abilities, so some will adhere to the surface of the ice crystals. If the freezing time is quicker, these bubbles will be trapped inside the ice before they are able to exit on the surface. The clusters of bubbles will refract and bend light, causing the ice to appear “white” or opaque.

Under Slower Freezing Conditions (medium freezer setting): Before all the bubbles in the ice are trapped, the air bubbles may group together to form larger bubbles. Larger bubbles will be able to rise to the surface at a faster speed, therefore escaping the ice before being trapped. While doing this, the bubbles may leave behind small exit trails in the ice.

Small bubbles exit trails in the ice.

Under Fast Freezing Conditions (coldest freezer setting): Air dissolved in the water will be moved towards the surface of the water due to the shape of the ice crystals. These bubbles are miniscule, with poor floating abilities, so some will adhere to the surface of the ice crystals. If the freezing time is quicker, these bubbles will be trapped inside the ice before they are able to exit on the surface. The clusters of bubbles will refract and bend light, causing the ice to appear “white” or opaque.

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Lengthy freeze time

It will generally take 8-12 hours for the ice cubes to freeze to their ideal form. The time will vary depending on the variations in freezers. In comparison to ordinary ice cubes, Polar Ice cubes take longer to solidify due to the following reasons:

- The ice cube is approximately 600cc, four times the ordinary 150cc trays.
- Insulated base prevents ice from freezing from the lower layers.

If the ice has not solidified after 12 hours, this is most likely due to a too high temperature in your freezer, or too many items in the freezer.

Adjustments in freezer settings

Generally, a freezer set to -18°C has the optimum freezing temperature. This would typically be the “middle” setting. Setting your freezer to a “warmer” setting will cause for a longer freezing time, but it will improve the transparency of the ice cubes. Setting your freezer to “coldest” setting, may produce small, needle-like bubbles in the ice.